CLAIMS

We claim:

1. A method of treating a neurological disorder in a subject in need therof comprising administering to the subject a therapeutically effective amount of a hexose.

2. The method of claim 1, wherein said hexose is selected from the group consisting of D-mannose, gulose and glucose-6-phosphate.

3. The method of claim 1, further comprising administering to the subject a cAMP modulator.

4. The method of claim 3, wherein said cAMP modulator is non-hydrolyzable cAMP analogues, adenylate cyclase activators, macrophage-derived factors that stimulate cAMP, macrophage activators, calcium ionophores, membrane depolarization, phosphodiesterase inhibitors, specific phosphodiesterase IV inhibitors, beta2-adrenoreceptor inhibitors or vasoactive intestinal peptide.

5. The method of claim 1, further comprising administering to said subject a macrophage-derived factor.

6. The method of claim 5, wherein the macrophage-derived factor is oncomodulin.

7. The method of claim 5, wherein the macrophage-derived factor is TGF-β.

8. The method of claim 1, wherein the treatment reverses neuronal damage.

9. The method of claim 1, wherein the treatment alleviates a neurological disorder.

10. The method of claim 1, wherein the disorder is selected from the group consisting of traumatic brain injury, stroke, cerebral aneurism, spinal cord injury, Parkinson's disease, amyotrophic lateral sclerosis, Alzheimer's disease, diffuse cerebral cortical atrophy, Lewy-body dementia, Pick disease, mesolimbocortical dementia, thalamic degeneration, Huntington chorea, cortical-striatal-spinal degeneration, cortical-basal ganglionic degeneration, cerebrocerebellar degeneration, familial dementia with spastic paraparesis, polyglucosan body disease, Shy-Drager syndrome, olivopontocerebellar

atrophy, progressive supranuclear palsy, dystonia musculorum deformans, Hallervorden-Spatz disease, Meige syndrome, familial tremors, Gilles de la Tourette syndrome, acanthocytic chorea, Friedreich ataxia, Holmes familial cortical cerebellar atrophy, Gerstmann-Straussler-Scheinker disease, progressive spinal muscular atrophy, progressive balbar palsy, primary lateral sclerosis, hereditary muscular atrophy, spastic paraplegia, peroneal muscular atrophy, hypertrophic interstitial polyneuropathy, heredopathia atactica polyneuritiformis, optic neuropathy, ophthalmoplegia, retina or optic nerve damage.

11. The method of claim 1, wherein the hexose is administered by introduction into a region of neuronal injury.

12. The method of claim 1, wherein the hexose is introduced into the cerebrospinal fluid of the subject.

13. The method of claim 1, wherein the hexose is introduced to the subject intrathecally.

14. The method of claim 1, wherein the hexose is introduced into a region selected from the group consisting of a cerebral ventricle, the lumbar area, and the cistema magna of the subject.

15. The method of claim 1, wherein the hexose is administered topically to the eye of the subject or by intraocular injection.

16. The method of claim 1, wherein the subject is a mammal.

17. The method of claim 16, wherein the mammal is a human.

18. The method of claim 1, wherein said neurological disorder is a spinal cord injury.

19. The method of claim 18, wherein the spinal cord injury is characterized by monoplegia, diplegia, paraplegia, hemiplegia and quadriplegia.

20. The method of claim 10, wherein the damage to the optic nerve is the result of glaucoma.

21. The method of claim 10, wherein the damage to the retina is the result of macular degeneration.

22. An article of manufacture comprising packaging material and a pharmaceutical agent contained within said packaging material, wherein said packaging material comprises a label which indicates said pharmaceutical may be administered, for a sufficient term at an effective dose, for treating a neurological disorder together with a pharmaceutically acceptable carrier, wherein the pharmaceutical agent comprises D-mannose.

23. The article of claim 22, wherein the article further comprises a cAMP modulator.

24. The article of claim 22, wherein the article further comprises oncomodulin.

25. A pharmaceutical formulation comprising D-mannose and a cAMP modulator, and a pharmaceutically acceptable carrier.

26. The pharmaceutical formulation of claim 25, further comprising oncomodulin.